

(19) World Intellectual Property Organization
International Bureau

Rec'd PCT/PTO 12 OCT 2004

(10) International Publication Number
WO 03/088025 A2(51) International Patent Classification⁷: **G06F 3/00**(74) Agent: **PITCHFORD, James, Edward; Sommerville & Rushton, 45 Grosvenor Road, St Albans AL1 3AW (GB).**(21) International Application Number: **PCT/GB03/00869**(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 3 March 2003 (03.03.2003)

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: English

(26) Publication Language: English

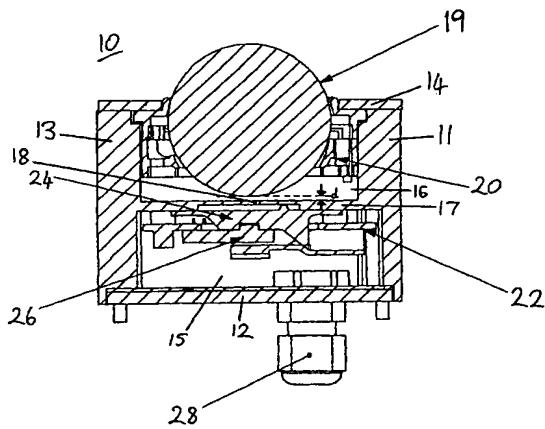
(30) Priority Data:

0208471.3 12 April 2002 (12.04.2002) GB
0221615.8 18 September 2002 (18.09.2002) GB(71) Applicant (*for all designated States except US*): **CURSOR CONTROLS LIMITED [GB/GB]**; Conroi House, Brunel Drive, Newark, Nottinghamshire NG24 2EG (GB).**Published:**

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVED POINTING DEVICE



WO 03/088025 A2

(57) **Abstract:** An electronic pointing or cursor control device comprising a first chamber and a second chamber, wherein: the two chambers are adjoined and separated by a fluid-tight separating wall; the first chamber contains electronic components; the second chamber comprises an aperture; the second chamber contains a ball, the ball protruding through said aperture; the said separating wall comprises an optically permeable region; and the electronic components include optical detection means directed towards the optically permeable region and the ball, the detection means being operable in use to detect motion of the ball and to generate electronic signals representative of said motion. The device may be a trackball or a mouse. Also provided is an electronic pointing or cursor control device comprising a ball and optical detection means responsive to movement of the ball, the optical detection means being operable in use to detect motion of the ball and to generate electronic signals representative of said motion, wherein the detection means are mounted at an angular position around the circumference of the ball such that a radial line from the ball to the detection means forms a non-zero angle with a diametric line though the ball normal to the mounting plane of the device.